

**REMARKS**

At the time of the Office Action dated April 3, 2006, claims 1-24 were pending and rejected in this application.

**CLAIMS 1-24 ARE REJECTED UNDER 35 U.S.C. § 101**

On pages 2 and 3 of the Office Action, the Examiner asserted that the claimed invention, as recited in claims 1-24, is directed to non-statutory subject matter. This rejection is respectfully traversed.

At the outset, Applicants note that all of the Examiner's assertions with regard to the claims vis-à-vis "non-statutory subject matter" are legally in error. For example, the Examiner's assertion that a "processor" does not constitute statutory matter is in direct contradiction to the plain language of 35 U.S.C. § 101. Claims 1 and 2 being directed to a machine is all that is required to satisfy the requirements of 35 U.S.C. § 101. In the decision of In re Warmerdam,<sup>1</sup> the Court concluded that the method claims recited in claims 1-4 "[involve] no more than the manipulation of basic mathematical constructs, the paradigmatic 'abstract idea.'" The Court then sustained the rejection of claims 1-4 under 35 U.S.C. § 101.

However, claim 5 of the same application recited "[a] machine having a memory which contains data representing a bubble hierarchy generated by the method of any of Claims 1 through 4." With regard to this claim, the Court stated that "[c]laim 5 is for a machine, and is

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<sup>1</sup> 3 F.3d 1354, 31 USPQ2d 1754 (Fed. Cir. 1994).

clearly patentable subject matter" despite the prior finding that method being performed by the machine was non-statutory subject matter. Therefore, since claims 1 and 2 are directed to a machine, then claims 1 and 2 are directed to statutory subject matter within the meaning of 35 U.S.C. § 101.

As to claims 3-13, the Examiner stated the following:

As per claims 3-13, a claimed method is "descriptive material" and therefore nonstatutory when claimed as descriptive material per se."

At the outset, Applicants note that the claims are directed to a method, not descriptive material. Moreover, even if the claims were directed to "descriptive material," the Examiner has failed to make any findings whether or not the so-called descriptive material is functional or nonfunctional. Moreover, the Examiner is incorrect in asserting that descriptive material is per se nonstatutory. Based upon the foregoing, it is readily apparent that the Examiner has failed to establish that the claimed subject matter recited in claims 3-13 is directed to nonfunctional descriptive material so as to be nonstatutory.

Regarding claims 14-24, the Examiner asserted:

In view of Applicant's disclosure, specification on page 16, paragraph [0036] the medium is not limited to tangible embodiments, instead being defined as including "*reproduction in a different material form*" which is intangible embodiments. Different material form can including intangible embodiments (e.g., optical fiber, or paper which implies the use of intangible media such as signals, carrier waves, transmissions). As such, the claim is not limited to statutory subject matter and is therefore non-statutory. (emphasis in original)

At the outset, Applicants note that the Examiner has failed to cite any case law that supports the Examiner's position. The Examiner's role is to apply the law, not to make law; and thus, unless the Examiner can support the Examiner's legal conclusion with case law, Applicants submit that the Examiner has improperly attempted to establish new law.

Notwithstanding the Examiner has failed to establish any legal support for the Examiner's legal conclusions, Applicants note that the Examiner's assertion is replete with both factual and legal errors. Although the Examiner asserts that medium may include intangible embodiments such as "signals, carrier waves, transmissions" the Examiner has failed to provide any factual support for this assertion. Applicants are unaware of how "signals, carrier waves, transmissions" could be considered "machine readable storage." Signals, carrier waves, transmissions are used in the transmission of data, not the storage of data.

Moreover, even if the claims could be construed to cover non-statutory subject matter, this fact alone is not dispositive with regard to a rejection under 35 U.S.C. § 101. The entire text of § 101 is reproduced below:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

In comparison, 35 U.S.C. § 102 which states "[a] person shall be entitled to a patent unless ..." (emphasis added). The difference between § 101 and § 102 of 35 U.S.C. is that § 102 is exclusive and § 101 is not exclusive (i.e., inclusive). Therefore, whereas the existence of a single piece of prior art may exclude a patent from granting under § 102, § 101 does not exclude a patent from granting, even if the claimed invention may cover non-statutory matter, so long as the claimed invention covers statutory subject matter, as defined in 35 U.S.C. § 101. This notion is both supported by case law and by common sense.

It is well known that although an abstract idea by itself may not be patentable, the inclusion of an abstract idea, such as a mathematical formula, within a claim does not necessarily negate the patentability of the claim.<sup>2</sup> Moreover, it is readily apparent that almost any claimed invention could cover non-statutory subject matter. Claims are only required to "particularly [point] out and distinctly [claim] the subject matter which the applicant regards as his invention."<sup>3</sup> Thus, the claims are not required to "enable" the practice of the claimed invention. Instead, "[t]he specification shall contain a written description of the invention ... to enable any person skilled in the art ... to make and use the same."<sup>4</sup>

Since the claims are not necessarily required to cover an "enabled" invention, the claims may also cover non-enabled and non-statutory subject matter. For example, a claim to a computer may not recite a power supply, yet without a power the supply, the computer would be non-functional, and it is well known that "non-functional" devices are not statutory subject matter. As another example, an otherwise patentable claims comprising the steps A, B, C, and D could also cover a process of steps A, A- (i.e., reverse the effect of step A), B, B-, C, C-, D, and D- such that the process does not produce a useful, concrete, tangible result. Yet another example would be a device that meets all the structural requirements of a machine claim yet the device is encased in cement, in which case the device is inoperable. Therefore, it is readily apparent that nearly all claims are capable of covering subject matter, which viewed in isolation, could be considered non-statutory subject matter. These results, however, are not necessarily dispositive as to whether or not the claimed invention, as a whole, is directed to statutory subject matter within the meaning of 35 U.S.C. § 101. The test as to whether or not a claim satisfies the

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<sup>2</sup> See *Diamond v. Diehr*, 450 U.S. 175, 185-88 (1981).

<sup>3</sup> Second paragraph of 35 U.S.C. § 112.

<sup>4</sup> First paragraph of 35 U.S.C. § 112.

requirement of 35 U.S.C. § 101 involves determining whether the claim covers some statutory subject matter, not whether or not all subject matter covered by the claim is deemed non-statutory.

In State Street Bank and Trust Company v. Signature Financial Group, Inc.,<sup>5</sup> the court set forth the criteria for establishing statutory subject matter under 35 U.S.C. § 101 as follows:

The question of whether a claim encompasses statutory subject matter should not focus on which of the four categories of subject matter a claim is directed to —process, machine, manufacture, or composition of matter—but rather on the essential characteristics of the subject matter, in particular, its practical utility. Section 101 specifies that statutory subject matter must also satisfy the other "conditions and requirements" of Title 35, including novelty, nonobviousness, and adequacy of disclosure and notice. See In re Warmerdam, 33 F.3d 1354, 1359, 31 USPQ2d 1754, 1757-58 (Fed. Cir. 1994). For purpose of our analysis, as noted above, claim 1 is directed to a machine programmed with the Hub and Spoke software and admittedly produces a "useful, concrete, and tangible result." Alappat, 33 F.3d at 1544, 31 USPQ2d at 1557. This renders it statutory subject matter, even if the useful result is expressed in numbers, such as price, profit, percentage, cost, or loss.

Thus, as articulated above, the test for determining whether subject matter is patentable under 35 U.S.C. § 101 involves deciding if the subject matter produces a "useful, concrete, and tangible result."

*Applicants have established utility*

A discussion of the procedural considerations regarding a rejection based upon lack of utility (i.e., 35 U.S.C. § 101) is found in M.P.E.P. § 2107.02. Specifically, M.P.E.P. § 2107.02(I) states that:

regardless of the category of invention that is claimed (e.g., product or process), an applicant need only make one credible assertion of specific utility for the claimed invention to satisfy 35 U.S.C. 101 and 35 U.S.C. 112

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<sup>5</sup> 149 F.3d 1368, 47 USPQ2d 1596 (Fed Cir. 1998).

In the first paragraph of the "Detailed Description of the Preferred Embodiments" section in Applicants' disclosure, Applicants stated the following:

The present invention is a method and system for checkpointing and restarting long running Web services. In accordance with the present invention, individual Web service instances can checkpoint their respective states associated with particular invocations either periodically or in response to a triggering event. More particularly, the individual Web service instances can invoke checkpointing functionality included with or in association with an underlying Web services engine supporting each of the Web services instances. For each Web service instance invocation, a uniquely identifying instance identifier can be persisted in memory during the checkpointing process as can any state information forwarded by the Web service instance. Additionally a correlator able to identify an asynchronous communications session between the specific invocation and an invoking client further can be persisted in memory. Subsequently, when a restarting of a Web service instance invocation is required, for example in consequence of an application server crash, the restarted Web service instance invocation can be restored to its former state by uploading each of the instance identifier, the persisted state information and the asynchronous correlator.

Applicants, therefore, have asserted a credible utility (i.e., Web service instance invocation can be restored to its former state).

As noted in M.P.E.P. § 2107.02(III)(A), the Court of Customs and Patent Appeals in In re Langer<sup>6</sup> stated the following:

As a matter of Patent Office practice, a specification which contains a disclosure of utility which corresponds in scope to the subject matter sought to be patented must be taken as sufficient to satisfy the utility requirement of § 101 for the entire claimed subject matter unless there is a reason for one skilled in the art to question the objective truth of the statement of utility or its scope. (emphasis in original)

Since a credible utility is contained in Applicants' specification, the utility requirement of 35 U.S.C. § 101 (i.e., whether the invention produces a useful, concrete, and tangible result) has been met. Therefore, Applicants respectfully solicit withdrawal of the imposed rejection of claims 1-24 under 35 U.S.C. § 101.

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<sup>6</sup> 503 F.2d 1380, USPQ 288 (CCPA 1974).

**CLAIMS 1-24 ARE REJECTED UNDER 35 U.S.C. § 102 AS BEING ANTICIPATED BY DOYLE ET AL., U.S. PATENT PUBLICATION NO. 2004/0243915 (HEREINAFTER DOYLE)**

On pages 4-10 of the Office Action, the Examiner asserted that Doyle discloses the invention corresponding to that claimed. This rejection is respectfully traversed.

The factual determination of anticipation under 35 U.S.C. § 102 requires the identical disclosure, either explicitly or inherently, of each element of a claimed invention in a single reference.<sup>7</sup> As part of this analysis, the Examiner must (a) identify the elements of the claims, (b) determine the meaning of the elements in light of the specification and prosecution history, and (c) identify corresponding elements disclosed in the allegedly anticipating reference.<sup>8</sup> This burden has not been met.

**Claim 1**

The Examiner asserted that the fail-over logic 170 of Doyle corresponds to the claimed checkpoint logic and that the optimization metrics 180, 230 corresponds to the claimed checkpoint data. The Examiner also asserted that the optimization logic 220 corresponds to the claimed restart logic. Applicants respectfully disagree.

At the outset, Applicants note that the Examiner has failed to establish that the fail-over logic of Doyle 170 "is programmed to store" the optimization metrics 180. Moreover, the optimization metrics are not used in a replacement for a failed individual Web service instance invocation. As noted in paragraphs [0039] and [0040], the optimization logic 220 identifies

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<sup>7</sup> In re Rijckaert, 9 F.3d 1531, 28 USPQ2d 1955 (Fed. Cir. 1993); Lindermann Maschinenfabrik GMBH v. American Hoist & Derrick Co., 730 F.2d 1452, 221 USPQ 481 (Fed. Cir. 1984).

<sup>8</sup> Lindermann Maschinenfabrik GMBH v. American Hoist & Derrick Co., *supra*.

replacement nodes 240A, 240B for the failed service without using any of the information found in the optimization metrics 180, 230. In paragraph [0041], Doyle teaches that the service metrics 230 are used to place new instances of the services across one or more replacement nodes in an optimal fashion. However, this teaching fails to identically disclose the claimed "restore said stored checkpoint data to a replacement."

With regard to the claimed "cleanup logic," the Examiner cited lines 16-20 of paragraph [0036] and lines 12-17 of paragraph [0045]. These passages cited by the Examiner, however, do not identically disclose the claimed cleanup logic, which removes the stored checkpoint data "for concluded, non-failed ones of the individual Web service instance invocations." The passages cited by the Examiner are silent as to this particular limitation. Therefore, for the reasons stated above, the Examiner has failed to establish that Doyle identically discloses the claimed invention, as recited in claim 1, within the meaning of 35 U.S.C. § 102.

#### Claims 3 and 14

Independent claims 3 and 14 recite storing a state object for a Web service instance and restarting a replacement Web service instance while providing the state object to the replacement Web service instance. The Examiner asserted that "individual platform metrics 250A, 250B" identically disclose the claimed Web service instance and that paragraph [0039] teaches that these individual platform metrics 250A, 250B are provided to a replacement Web service instance. Applicants respectfully disagree.



The individual platform metrics 240A, 250B are not described by Doyle as being for a requesting Web service instance that subsequently fails. Instead, Doyle teaches that the "[i]ndividual platform metrics 250A, 250B can be determined for each respective replacement node 240A, 240B." Thus, the individual platform metrics 240A, 250B are for the replacement node, not the failed node. Moreover, Doyle fails to teach that these individual platform metrics 240A, 250B are stored (i.e., "storing a state object ..."), as recited in the claims. Thus, for the reasons stated above, the Examiner has failed to establish that Doyle identically discloses the claimed invention, as recited in claims 3 and 14, within the meaning of 35 U.S.C. § 102. Applicants, therefore, respectfully solicit withdrawal of the imposed rejection of claims 1-24 under 35 U.S.C. § 102 for anticipation based upon Doyle.

Applicants have made every effort to present claims which distinguish over the prior art, and it is believed that all claims are in condition for allowance. However, Applicants invite the Examiner to call the undersigned if it is believed that a telephonic interview would expedite the prosecution of the application to an allowance. Accordingly, and in view of the foregoing remarks, Applicants hereby respectfully request reconsideration and prompt allowance of the pending claims.

Although Applicants believe that all claims are in condition for allowance, the Examiner is directed to the following statement found in M.P.E.P. § 706(II):

When an application discloses patentable subject matter and it is apparent from the claims and the applicant's arguments that the claims are intended to be directed to such patentable subject matter, but the claims in their present form cannot be allowed because of defects in form or omission of a limitation, the examiner should not stop with a bare objection or rejection of the claims. The examiner's action should be constructive in nature and when possible should offer a definite suggestion for correction.

Application No.: 10/612,613

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 09-0461, and please credit any excess fees to such deposit account.

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Respectfully submitted,

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